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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/450,584	11/30/1999	SHIGERU TSUKIMURA	046601-5034	7883
9629	7590	05/04/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			POKRZYWA, JOSEPH R	
			ART UNIT	PAPER NUMBER
			2622	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/450,584	Applicant(s) TSUKIMURA, SHIGERU	
	Examiner Joseph R. Pokrzywa	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR.1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/11/05 has been entered.

Response to Amendment

2. Applicant's amendment was received on 2/23/05, and has been entered and made of record. Currently, **claims 1-9** are pending.

Response to Arguments

3. Applicant's arguments, filed 2/23/05, seen in pages 7-9, with respect to the rejection(s) of independent claim(s) 1, 2, 6, 7, and 9 under 102(b), as being anticipated by Coleman (U.S. Patent Number 5,784,172) have been fully considered. The examiner agrees with applicant, in that Fig. 9 of Coleman, as cited in the Office action dated 12/14/04, teaches of different steps for process black colors and non-process black colors (being the two output paths from step S410), thus failing to show of the newly added limitation that requires interpreting the image data regardless of the background color of a black area. However, upon further review of the reference, the examiner believes that the claims, as currently worded, can still be interpreted by Coleman, using

Art Unit: 2622

the steps described in Fig. 8, instead of the steps described in Fig. 9. The examiner notes that Fig. 9 is simply a sub-step of step S40 in Fig. 8. With this, Coleman can be interpreted as teaching an image processing device (see Fig. 6, print data generator 200) comprising an input part to which image data represented by a plurality of colors including black is input (step S20 in Fig. 8, column 5, lines 25-67), a black area detector that detects a black area in the image data (step S410 in Fig. 9, which is a sub-step of step S40 seen in Fig. 8, and column 6, line 57-column 7, line 40), an image interpreting unit that sequentially interprets the image data regardless of contents of the image data in a background of the black area (being the steps of S30-S50 in Fig. 8, column 6, lines 1-11, wherein the CPU 220 sequentially interprets the next object in step S30, regardless of the contents of the image data), and an output part that adds color materials, except a black material, of a predetermined amount to the black area and outputs the color materials and the black material (step S60, column 4, lines 27-47, and column 6, line 12-column 7, line 57, whereby a process black section will be reformulated and printed with high levels of non-black toners to match a surrounding area having high levels of background toner).

4. Therefore, the rejection of **claims 1-3 and 6-9**, as cited in the Office action dated 12/14/04, under 35U.S.C.102(b) as being anticipated by Coleman, are maintained in this Office action. Additionally, for the same reasons discussed above, the rejection of **claims 4 and 5**, as cited in the Office action dated 12/14/04, under 35U.S.C.103(a) as being unpatentable over Coleman in view of Dermer *et al.* (U.S. Patent Number 5,313,570), are also maintained.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-3, and 6-9** are rejected under 35 U.S.C. 102(b) as being anticipated by Coleman (U.S. Patent Number 5,784,172, cited in the Office action dated 12/14/04).

Regarding **claim 1**, Coleman discloses an image processing device (see Fig. 6, print data generator 200) comprising an input part to which image data represented by a plurality of colors including black is input (step S20 in Fig. 8, column 5, lines 25-67), a black area detector that detects a black area in the image data (step S410 in Fig. 9, which is a sub-step of step S40 seen in Fig. 8, and column 6, line 57-column 7, line 40), an image interpreting unit that sequentially interprets the image data regardless of contents of the image data in a background of the black area (being the steps of S30-S50 in Fig. 8, column 6, lines 1-11, wherein the CPU 220 sequentially interprets the next object in step S30, regardless of the contents of the image data), and an output part that adds color materials, except a black material, of a predetermined amount to the black area and outputs the color materials and the black material (step S60, column 4, lines 27-47, and column 6, line 12-column 7, line 57, whereby a process black section will be reformulated and printed with high levels of **non-black** toners to match a surrounding area having high levels of background toner).

Regarding **claim 2**, Coleman discloses an image processing device (see Fig. 6, print data generator 200) comprising an input part to which image data represented by a plurality of colors

Art Unit: 2622

including black is input (step S20 in Fig. 8, column 5, lines 25-67), a black area detector that detects a black area in the image data (step S410 in Fig. 9, which is a sub-step of step S40 seen in Fig. 8, and column 6, line 57-column 7, line 40), an image interpreting unit that sequentially interprets the image data regardless of contents of the image data in a background of the black area (being the steps of S30-S50 in Fig. 8, column 6, lines 1-11, wherein the CPU 220 sequentially interprets the next object in step S30, regardless of the contents of the image data), an edge detector that detects an edge of the black area (step S440 in Fig. 9, being a sub-step of step S40 seen in Fig. 8, column 7, lines 41-61), and an output part that adds color materials, except a black material, of an amount according to colors in the periphery of the edge to the edge, adds the color materials, except the black material, of a predetermined amount to the black area except the edge, and outputs the color materials and the black material (step S60, column 4, lines 27-47, and column 6, line 12-column 7, line 57, whereby a process black section will be reformulated and printed with high levels of **non-black** toners to match a surrounding area having high levels of background toner).

Regarding *claim 3*, Coleman discloses the device discussed above in claim 2, and further teaches of an adjuster that adjusts the amount of the color materials except the black material added to the edge in case a total amount of the color materials and the black material to be output to the edge exceeds a predetermined amount (column 4, lines 27-47, and column 8, line 4-column 9, line 35).

Regarding *claim 6*, Coleman discloses an image processing method, comprising the steps of inputting image data represented by a plurality of colors including black (step S20 in Fig. 8, column 5, lines 25-67), detecting a black area in the image data (step S410 in Fig. 9, which is a

Art Unit: 2622

sub-step of step S40 seen in Fig. 8, and column 6, line 57-column 7, line 40), interpreting the image data sequentially regardless of contents of the image data in a background of the black area (being the steps of S30-S50 in Fig. 8, column 6, lines 1-11, wherein the CPU 220 sequentially interprets the next object in step S30, regardless of the contents of the image data), and adding color materials, except a black material, of a predetermined amount to the black area and outputting the color materials and the black material (step S60, column 4, lines 27-47, and column 6, line 12-column 7, line 57, whereby a process black section will be reformulated and printed with high levels of **non-black** toners to match a surrounding area having high levels of background toner).

Regarding *claim 7*, Coleman discloses an image processing device (see Fig. 6, print data generator 200) comprising an input part to which image data represented by a plurality of colors including black is input (step S20 in Fig. 8, column 5, lines 25-67), a black area detector that detects a black area in the image data (step S410 in Fig. 9, which is a sub-step of step S40 seen in Fig. 8, and column 6, line 57-column 7, line 40), an image interpreting unit that sequentially interprets the image data regardless of contents of the image data in a background of the black area (being the steps of S30-S50 in Fig. 8, column 6, lines 1-11, wherein the CPU 220 sequentially interprets the next object in step S30, regardless of the contents of the image data), an image determination unit that determines a type of an image in each area in the image data (step S440 in Fig. 9, which is a sub-step of step S40 of Fig. 8, column 5, lines 13-24, and column 7, line 34-column 8, line 8), and an output part that adds color materials, except a black material, of a predetermined amount to the black area and outputs the color materials and the black material (step S60, column 4, lines 27-47, and column 6, line 12-column 7, line 57, whereby a

Art Unit: 2622

process black section will be reformulated and printed with high levels of **non-black** toners to match a surrounding area having high levels of background toner).

Regarding *claim 8*, Coleman discloses the device discussed above in claim 7, and further teaches that the output part adds color materials, except the black material, of a predetermined amount to an area determined to hold a character by the image determination unit and detected as a black area by the black area detector regardless of contents of the image data in a background of the black area and outputs the color materials and a black material (steps S410-S460, being sub-steps of step S40 in Fig. 8, column 4, lines 27-47, and column 6, line 65-column 8, line 8, whereby a process black section will be reformulated and printed with high levels of non-black toners to match a surrounding area having high levels of background toner).

Regarding *claim 9*, Coleman discloses an image processing method, comprising the steps of inputting image data represented by a plurality of colors including black (step S20 in Fig. 8, column 5, lines 25-67), interpreting the image data sequentially regardless of contents of the image data in a background of the black area (being the steps of S30-S50 in Fig. 8, column 6, lines 1-11, wherein the CPU 220 sequentially interprets the next object in step S30, regardless of the contents of the image data), and adding color materials, except a black material, of a predetermined amount to an area determined to hold a predetermined image type and detected as a black area from among areas in the image data and outputting the color materials and the black material (step S60, column 4, lines 27-47, and column 6, line 12-column 7, line 57, whereby a process black section will be reformulated and printed with high levels of **non-black** toners to match a surrounding area having high levels of background toner).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman (U.S. Patent Number 5,784,172, cited in the Office action dated 12/14/04) in view of Dermer *et al.* (U.S. Patent Number 5,313,570, cited in the Office action dated 12/14/04).

Regarding **claim 4**, Coleman discloses the device discussed above in claim 1, and further teaches that the output part is based upon primary colors of black, yellow, magenta and cyan (see abstract, column 6, lines 44-64, and column 8, lines 26-55), and an amount of each color material of the Y, M, C is output to the black area (column 4, lines 27-47, and column 8, line 26-column 9, line 35). However, Coleman does not specifically teach if the amount of each color material of the Y, M, C is output to the black area *in a range of 10 to 40% (percentage by weight) of the amount of black material*.

Dermer discloses an image processing device (see Fig. 1) comprising an input part to which image data represented by a plurality of colors including black is input (see Fig. 1), a detector that detect boundary areas in the image data (see abstract), and an output part that adds color materials, except a black material, of a predetermined amount to the detected area regardless of contents of the image data in a background of the area and outputs the color materials and the black material (column 19, line 8-column 20, line 54). Further, Dermer teaches that the output part is based upon primary colors of black, yellow, magenta and cyan, and an

Art Unit: 2622

amount of each color material of the Y, M, C is output to the black area in a range of 10 to 40% (percentage by weight) of the amount of black material (column 19, line 8-column 20, line 54, and seen in Fig. 24, whereby the output part outputs Y, M, C materials in any specified range, included within the range of 10 to 40% percentage by weight).

Coleman & Dermer are combinable because they are from the same field of endeavor, being printing systems that process images having input data with a plurality of colors. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the range of color material indicated by Dermer within the system of Coleman. The suggestion/motivation for doing so would have been that Coleman's system would be capable of printing more colors, since different combinations of colors, as well as tints and degreeds, can be achieved by varying the weight percentages of each ink, as recognized by Dermer in column 19, lines 8-26. Therefore, it would have been obvious to combine the teachings of Dermer with the system of Coleman to obtain the invention as specified in claim 4.

Regarding *claim 5*, Coleman and Dermer disclose the device discussed above in claim 4, and Coleman further teaches of a reduction unit that reduces the amount of the color material of the Y, M, C, keeping the amount of the black material in case a total amount of the color materials of K, Y, M, C exceeds a predetermined value (column 4, lines 27-47, and column 8, line 4-column 9, line 35).

Art Unit: 2622

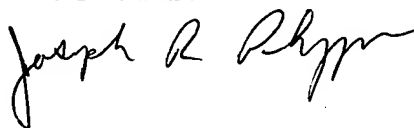
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joe Pokrzywa whose telephone number is (571) 272-7410. The examiner can normally be reached on Monday-Friday, 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph R. Pokrzywa
Primary Examiner
Art Unit 2622



jrj